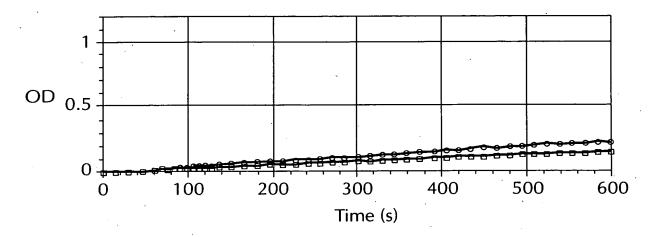
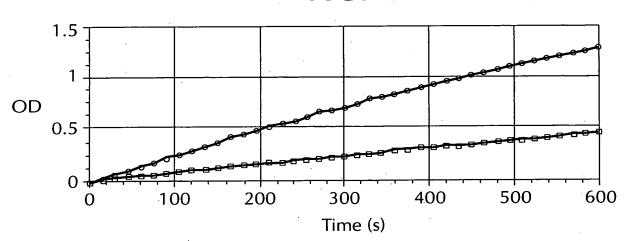
FIG. 1A



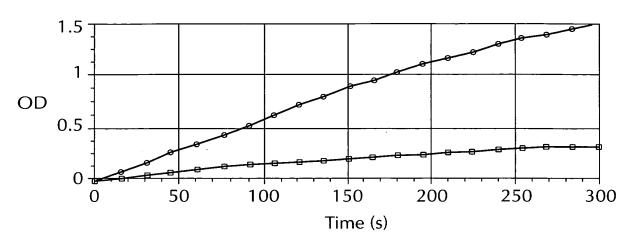
$$V_{app}(S) = 21.8$$
  $V_{app}(R) = 14.9$   $E_{app} = 1.5$ 

#### FIG. 1B



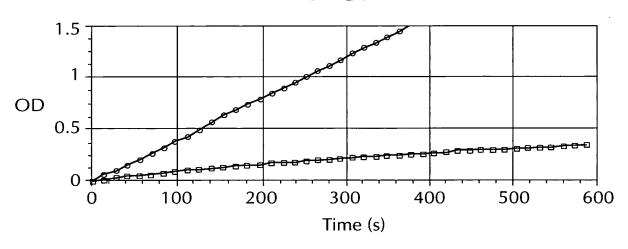
$$V_{app}(S) = 128.4$$
  $V_{app}(R) = 43.2$   $E_{app} = 3.0$ 

FIG. 1C



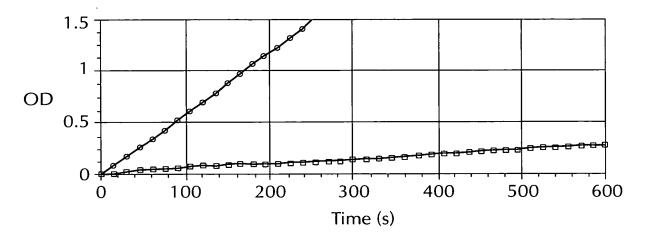
$$V_{app}(S) = 310.8$$
  $V_{app}(R) = 67.4$   $E_{app} = 4.6$ 

FIG. 1D



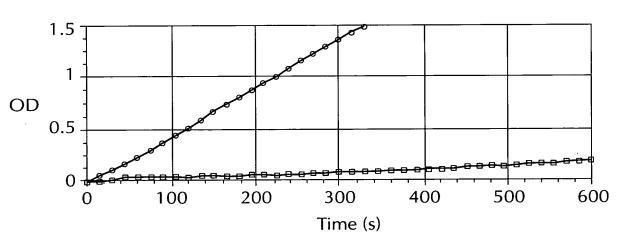
$$V_{app}(S) = 241.1 \quad V_{app}(R) = 35.2 \quad E_{app} = 6.9$$

FIG. 1E



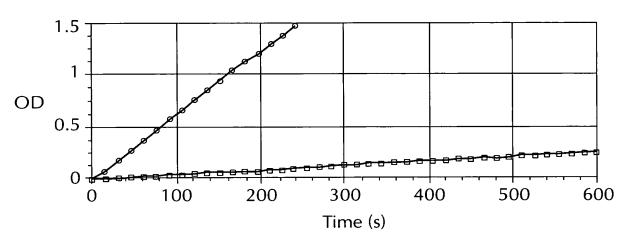
$$V_{app}(S) = 355.6$$
  $V_{app}(R) = 26.5$   $E_{app} = 13.4$ 

FIG. 1F



$$V_{app}(S) = 275.9$$
  $V_{app}(R) = 17.3$   $E_{app} = 15.9$ 





$$V_{app}(S) = 384.7$$
  $V_{app}(R) = 25.3$   $E_{app} = 15.2$ 

# FIG. 2A

	10	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GGATCCCC GGTTCTCCCGGGGATCCCCCGGGGATCCCCCGGTTCTCCCGGGGATCCCCCGGTTCTCCCGGGGATCCCCCGGGGATCCCCCGGGGATCCCCCGGGGATCCCCCGGGGATCCCCCGGGGATCCCCCGGGGATCCCCCGG	19 20 20 20 20 20 20 20
	20 30	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G A A G G A T T C G G G C G A T G G C T G	39 40 40 40 40 40 40
	40 50	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC GCAGGACGCGCCCTCGGCC	59 60 60 60 60 60
	60 70	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A C C A T C A A C C T G A G A T G A G A A	79 80 80 80 80 80 80
	80 90	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	CAACATGAAGAAGAAGTCTC CAACATGAAGAAGAAGTATC CAACATGAAGAAGAAGTCTC CAACATGAAGAAGAAGTCTC CAACATGAAGAAGAAGTCTC CAACATGAAGAAGAAGTCTC CAACATGAAGAAGAAGTCTC CAACATGAAGAAGAAGTCTC	99 100 100 100 100 100
	100 110	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC TGCTCCCCCTCGGCCTGGCC	119 120 120 120 120 120 120

## FIG. 2B

	120	130	
WILD TYPE		CGCCTCTCTCGC	139
P1B 01-H1		CGCCTCTCTCGC	140
P1B 01-E4		CGCCTCTCTCGC	140
P2B 08-H3		CGCCTCTCTCGC	140
P3B 13-D10		CGCCTCTCTCGC CGCCTCTCTCGC	140 140
P4B 04-H3 P5B 14-C11		CGCCTCTCTCGC	140
P4BSF 03-G10		CGCCTCTCTCGC	140
	140	150	
WILD TYPE		CTCTGATCCAGG	159
P1B 01-H1		CCTCTGATCCAGG	160
P1B 01-E4		CCTCTGATCCAGG	160
P2B 08-H3		CCTCTGATCCAGG	160
P3B 13-D10		CCTCTGATCCAGG	160
P4B 04-H3 P5B 14-C11		C C T C T G A T C C A G G C C T C T G A T C C A G G	160 160
P4BSF 03-G10		CCTCTGATCCAGG	160
	1.60	170	
WILD TYPE	160 CCAGCACO	170 CTACACCCAGACC	179
P1B 01-H1		CTACACCCAGACC	180
P1B 01-E4	CCAGCACO	CTACACCCAGACC	180
P2B 08-H3	= =	CTACACCCAGACC	180
P3B 13-D10		CTACACCCAGACC	180
P4B 04-H3 P5B 14-C11		C T A C A C C C A G A C C C T A C A C C C A G A C C	180 180
P4BSF 03-G10		CTACACCCAGACC	180
	100	100	•
WII D TYPE	180	190 CCATCGTGCTGGC	- 199
WILD TYPE	AAATACC	CCATCGTGCTGGC	199 200
WILD TYPE P1B 01-H1 P1B 01-E4	A A A T A C C C A A A T A C C C A A A T A C C C	C C A T C G T G C T G G C C C A T C G T G C T G G C C C A T C G T G C T G G C	200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3	A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C	CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC	200 200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10	A A A T A C C C A A A T A C C C	CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC	200 200 200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3	A A A T A C C C A A A T A C C C	CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC	200 200 200 200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10	A A A T A C C C A A A T A C C C	CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC CCATCGTGCTGGC	200 200 200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C	CCATCGTGCTGGCCCATCGTGCCCATCGTGCTGCCCATCGTGCTGGCCCATCGTGCTGGCCCATCGTGCTGGCCCATCGTGCCTGGCCCATCGTGCTGGC	200 200 200 200 200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	A A A T A C C C A A A T A C C C	CCATCGTGCTGGCCCATCGTGCCCATCGTGCTGCCCATCGTGCTGGCCCATCGTGCTGGCCCATCGTGCTGGCCCATCGTGCTGGCCCATCGTGCTGGCCCATCGTGCTGGC	200 200 200 200 200 200 200
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C C A C G G C C C C A C G G C C	CCATCGTGCTGGC	200 200 200 200 200 200 200 200 
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4	A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C C C A C G G C C C C A C G G C C C C A C G G C C	CCATCGTGCTGGC ATGCTGCTGGC	200 200 200 200 200 200 200 200 200 220 220 220
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3	A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C C C A C G G C A C C A C G G C A C C A C G G C A C C A C G G C A	CCATCGTGCTGGC ATGCTCGGCTTCGATGCTCGATGCTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCG	200 200 200 200 200 200 200 200 220 220
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10	A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C C C A C G G C A C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A C C C A C G G C A	CCATCGTGCTGGC ATGCTCGGCTTCGATGCTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCG	200 200 200 200 200 200 200 219 220 220 220 220
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3	A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G C C C C A C G C C C C A C G C C C C A C G C C C C A C C G C C C C A C C C C C C C C A C C C C C C	CCATCGTGCTGGC ATGCTCGGCTTCGATGCTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGATGCTCGATGCTCGATGCTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCGATGCTCGGCTTCG	200 200 200 200 200 200 200 200 220 220
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P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3	A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A A A T A C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C A C G G C C C C T G C T C C C C T G C T C C C C T G C T C C C C T G C T C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C T G C T C C C C C C T G C T C C C C C C T G C T C C C C C C T G C T C C C C C C T C C C C C C C C C C C	C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T G G C C A T C G T G C T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C T T C G A T G C T C G G C C T C G C C C C T C G G C C T G G C C C C T C G G C C T G G C C C C T C G G C C T G G C C C C T C G G C C T G G C C C C T C G G C C T G G C C C C T C G G C C T G G C C C C T C G G C C T G G C C	200 200 200 200 200 200 200 220 220 220

# FIG. 2C v

	240 250	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	TACTGGTTCGGCATTCCCAG TACTGGTTCGGCATTCCCAG TACTGGTTCGGCATTCCCAG TACTGGTTCGGCATTCCCAG TACTGGTTCGGCATTCCCAG TACTGGTTCGGCATTCCCAG TACTGGTTCGGCATTCCCAA TACTGGTTCGGCATTCCCAA TACTGGTTCGGCATTCCCAG	259 260 260 260 260 260 260 260
	260 270	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	CGCCTTGCGCCGTGACGGTGCGCCTTGCGCCGTGACGGTGCGCCGTGACGGTGCGCCGTGACGGTGCGCCGTGACGGTGCGCCGTGACGGTGCGCCGTTGACGGTGCGCCTTGCGCCGTGACGGTGCGCCTTGCGCCGTGACGGTGCGCCCTTGCGCCCGTGACGGTGCGCCCTTGCCGCCGTGACGGTGCCGCCTTGCCGCCGTGACGGTGCCGCCCTTGCCGCCGTGACGGTG	279 280 280 280 280 280 280 280
	280 290	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA CCCAGGTCTACGTCACCGAA	299 300 300 300 300 300 300 300
	300 310	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GTCAGCCAGTTGGACACCTC GTCAGCCAGTTGGACACCTC GTCAGCCAGTTGGACACCTC GTCAGCCAGTTGGACACCTC GCCAGCCAGTTGGACACCTC GGCAGCCAGTTGGACACCTC GGCAGCCAGTTGGACACCTC GGCAGCCAGTTGGACACCTC	319 320 320 320 320 320 320 320
	320 330	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10	GGAAGTCCGCGGCGAGCAGT GGAAGTCCGCGGCGAGCAGT GGAAGTCCGCGGCGAGCAGT GGAAGTCCGCGGCGAGCAGT GGAAGTCCGCGGCGAGCAGT GGAAGTCCGCGGCGAGCAGT	339 340 340 340 340 340
P4B 04-H3 P5B 14-C11 P4BSF 03-G10	G G A A G T C C G C G G C G A G C A G T G G A A G T C C G C G G C G A G C A G T	340 340
P5B 14-C11		

FIG. 2D

	360 370	
WILD TYPE P1B 01-H1 P1B 01-E4	ATCGTCGCCCTCAGCGGCCA ATCGTCGCCCTCAGCGGCCA ATCGTCGCCCTCAGCGGCCA	379 380 380
P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	A T C G T C G C C C T C A G C G G C C A A T C G T C G C C C T C A G C G G C C A A T C G T C G C C C T C A G C G G C C A A T C G T C G C C C T C A G C G G C C A	380 380 380 380
P4BSF 03-G10	ATCGTCGCCTCAGCGGCCA	380
WILD TYPE	380 390 G C C C A A G G T C A A C C T G A T C G	399
P1B 01-H1 P1B 01-E4	G C C C A A G G T C A A C C T G A T C G G C C C A A G G T C A A C C T G A T C G	400 400
P2B 08-H3 P3B 13-D10	G C C C A A G G T C A A C C T G A T C G G C C C A A G G T C A A C C T G A T C G	400
P4B 04-H3	G C C C A A G G T C A A C C T G A T C G G C C C A A G G T C A A C C T G A T C G	400
P5B 14-C11 P4BSF 03-G10	GCCCAAGGTCAACCTGATCG	400
WILD TYPE	400 410 G C C A C A G C C A C G G C G G C C G	419
WILD TYPE P1B 01-H1	G C C A C A G C C A C G G C G G G C C G G C C A C A G C C A C G G C G G C C G	420 420
P1B 01-E4 P2B 08-H3	GCCACAGCCACGGCGGCCG	420
P3B 13-D10 P4B 04-H3	G C C A C A G C C A C G G C G G G C C G G C C A C A G C C A C G G C G G G C C G	420
P5B 14-C11 P4BSF 03-G10	G C C A C A G C C A C G G C G G C C G G C C A C A G C C A C G G C G G C C G	420 420
	420 430	
WILD TYPE P1B 01-H1	ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC	439 440
P1B 01-H1 P1B 01-E4	ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC	
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10	ACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGC	440 440 440 440
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	ACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGC	440 440 440 440 440
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3	ACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGCACCATCCGCTACGTCGCCGC	440 440 440 440
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C  440  450  C G T A C G T C C C G A C C T G A T C G	440 440 440 440 440 440
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4	ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC CGCACCATCCGCTACGTCGCCGC CGTACGTCCGCCGC	440 440 440 440 440 440 460
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10	ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC ACCATCCGCTACGTCGCCGC CGTACGTCCCGACCTGATCG CGTACGTCCCGACCTGATCG CGTACGTCCCGACCTGATCG CGTACGTCCCGACCTGATCG	440 440 440 440 440 460 460 460 460
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G	440 440 440 440 440 460 460 460 460 460
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10 WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G	440 440 440 440 440 460 460 460 460
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T T C C C G A C C T G A T C G C G T T C C C G A C C T G A T C G	440 440 440 440 440 460 460 460 460 479
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T T C C C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C	440 440 440 440 440 460 460 460 460 480
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P5B 14-C11 P4BSF 03-G10	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C	440 440 440 440 440 460 460 460 480 480 480
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3	A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C A C C A T C C G C T A C G T C G C C G C C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T A C G T C C C G A C C T G A T C G C G T T C C C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C C T T C C G C C A C C A G C G T C G G C	440 440 440 440 440 460 460 460 480 480

### FIG. 2E

# FIG. 2F

	600 610	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	AGCGGCAGCACCGGTACGCA AGCGGCGGCACCGGTACGCA AGCGGCGGCACCGGTACGCA AGCGGCGCACCGGTACGCA AGCGGCGCACCGGTACGCA AGCGGCGCACCGGTACGCA AGCGGCGCACCGGTACGCA AGCGGCGCACCGGTACGCA AGCGGCGCACCGGTACGCA	619 620 620 620 620 620 620
	620 630	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GAATTCACTGGGCTCGCTGG GAATTCACTGGGCTCGCTGG GAATTCACTGGGCTCGCTGG GAATTTACTGGGCTCGCTGG GAATTTACTGGGCTCGCTGG GAATTTACTGGGCTCGCTGG GAATTTACTGGGCTCGCTGG GAATTTACTGGGCTCGCTGG GAATTTACTGGGCTCGCTGG	639 640 640 640 640 640
	640 650	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	AGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGTAGTCGCTGAACAGCGAGGGT	659 660 660 660 660 660
	660 670	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA GCCGCGCGCTTCAACGCCAA	679 680 680 680 680 680
	680 690	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A G T A C C C G C A G G G C A T C C C C A	699 700 700 700 700 700 700
	700 710	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	CCTCGGCCTGCGGCGAAGGCCCTCGGCCTGCGGCGAAGGCCCTCGGCCTGCGGCGAAGGCCTCGGGCGAAGGCCCTCGGCCTAGCGCGAAGGCCCTCGGCCTGCGGCGAAGGCCCTCGGCCTGCGGCGAAGGCCCTCGGCCTGCGGCGAAGGCCCTCGGCCTGCGGCGAAGGC	719 720 720 720 720 720 720 720

### FIG. 2G

	720 730	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GCCTACAAGGTCAACGGCGT GCCTACAAGGTCAACGGCGT GCCTACAAGGTCAACGGCGT GCCTACAAGGTCAACGGCGT GCCTACAAGGTCAACGGCGT GCTTACAAGGTCAACGGCGT GCTTACAAGGTCAACGGCGT	739 740 740 740 740 740 740 740
	740 750	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG GAGCTATTACTCCTGGAGCG	759 760 760 760 760 760 760 760
	760 770	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GTTCCTCGCCGCTGACCAAC GTTCCTCGCCGCTGACCAAC GTTCCTCGCCGCTGACCAAC GTTCCTCGCCGCTGACCAAC GTTCCTCGCCGCTGACCAAC GTTCCTCGCCGCTGACCAAC GTTCCTCGCCGCTGACCAAC	779 780 780 780 780 780 780 780
	780 790	
WILD TYPE		
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC	799 800 800 800 800 800 800
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC	800 800 800 800 800 800
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC	800 800 800 800 800 800
P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10  WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC TTCCTCGATCCGAGCGACGC  TTCCTCGATCCGAGCGACGC  TTCCTCGGCGCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC CTTCCTCGGCGCCCTCGTCGC	800 800 800 800 800 800 820 820 820 820

## FIG. 2H

	840 850	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3	GCCAACGACGCCTGGTCGG GCCAACGACGCCTGGTCGG GCCAACGACGCCTGGTCGG GCCAACGACGCCTGGTCGG	859 860 860 860
P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GCCAACGACGGCCTGGTCGG GCCAACGACGGCCTGGTCGG GCCAACGACGGCCTGGTCGG GCCAACGACGGCCTGGTCGG	860 860 860 860
F4DSF 05-G10		
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11	860 870  CACCTGCAGTTCGCACCTGG CACCTGCAGTTCGCACCTGG CACCTGCAGTTCGCACCTGG CACCTGCAGTTCGCACCTGG CACCTGCAGTTCGCACCTGG CACCTGCAGTTCGCACCTGG CACCTGCAGTTCGCACCTGG	879 880 880 880 880 880
P4BSF 03-G10	CACCTGCAGTTCGCACCTGG	880
	890	000
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC GCATGGTGATCCGCGACAAC	899 900 900 900 900 900 900
	900 910	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA TACCGGATGAACCACCTGGA	919 920 920 920 920 920 920
	920 930	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCTTCG CGAGGTGAACCAGGTCCTCG CGAGGTGAACCAGGTCCTCG	939 940 940 940 940 940 940
	940 950	
WILD TYPE P1B 01-H1 P1B 01-E4 P2B 08-H3 P3B 13-D10 P4B 04-H3 P5B 14-C11 P4BSF 03-G10	GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG GCCTCACCAGCCTGTTCGAG	959 960 960 960 960 960

## **FIG. 21**

WILD TYPE         ACCAGCCCGGTCAGCGTCTA         979           P1B 01-H1         ACCAGCCCGGTCAGCGTCTA         980           P1B 01-E4         ACCAGCCCGGTCAGCGTCTA         980           P2B 08-H3         ACCAGCCCGGTCAGCGTCTA         980           P3B 13-D10         ACCAGCCCGGTCAGCGTCTA         980           P4B 04-H3         ACCAGCCCGGTCAGCGTCTA         980           P5B 14-C11         ACCAGCCCGGTCAGCGTCTA         980           P4BSF 03-G10         ACCAGCCCGGTCAGCGTCTA         980           WILD TYPE         CCGCCAGCACGCCAACCGCC         999           WILD TYPE         CCGCCAGCAGCACGCCAACCGCC         1000           P1B 01-H1         CCGCCAGCACGCCAACCGCC         1000           P2B 08-H3         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           P3B 13-D10         TGAAGAACGCCAGCCAACCGCC         1000           P4BSF 03-G10         TGAAGAACGCCAGCCAACCGCC         1000           P3B 01-H1         TGAAGAACGCCAGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P3B 14-C11         TGAAGAACGCCAGCCTGTAG         1020
P1B 01-E4         A C C A G C C C G G T C A G C G T C T A         980           P2B 08-H3         A C C A G C C C G G T C A G C G T C T A         980           P3B 13-D10         A C C A G C C C G G T C A G C G T C T A         980           P4B 04-H3         A C C A G C C C G G T C A G C G T C T A         980           P5B 14-C11         A C C A G C C C G G T C A G C G T C T A         980           P4BSF 03-G10         A C C A G C C C G G T C A G C G T C T A         980           WILD TYPE         C C G C C A G C A C G C C A A C C G C C         1000           P1B 01-H1         C C G C C A G C A C G C C A A C C G C C         1000           P1B 01-E4         C C G C C A G C A C G C C A A C C G C C         1000           P2B 08-H3         C C G C C A G C A C G C C A A C C G C C         1000           P3B 13-D10         C C G C C A G C A C G C C A A C C G C C         1000           P4B 04-H3         C C G C C A G C A C G C C A A C C G C C         1000           P5B 14-C11         T G A A G A A C G C C A G C C T G T A G         1020           P1B 01-H1         T G A A G A A C G C C A G C C T G T A G         1020           P1B 01-E4         T G A A G A A C G C C A G C C T G T A G         1020           P3B 13-D10         T G A A G A A C G C C A G C C T G T A G         1020           P4B 04-H3
P2B 08-H3         ACCAGCCCGGTCAGCGTCTA         980           P3B 13-D10         ACCAGCCCGGTCAGCGTCTA         980           P4B 04-H3         ACCAGCCCGGTCAGCGTCTA         980           P5B 14-C11         ACCAGCCCGGTCAGCGTCTA         980           P4BSF 03-G10         ACCAGCCCGGTCAGCGTCTA         980           980           990           WILD TYPE         CCGCCAGCACGCCAACCGCC         999           P1B 01-H1         CCGCCAGCACGCCAACCGCC         1000           P1B 01-E4         CCGCCAGCACGCCAACCGCC         1000           P2B 08-H3         CCGCCAGCACGCCAACCGCC         1000           P4B 04-H3         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-H2         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020
P3B 13-D10         ACCAGCCCGGTCAGCGTCTA         980           P4B 04-H3         ACCAGCCCGGTCAGCGTCTA         980           P5B 14-C11         ACCAGCCCGGTCAGCGTCTA         980           P4BSF 03-G10         ACCAGCCCGGTCAGCGTCTA         980           980           980           999           WILD TYPE         CCGCCAGCACGCCAACCGCC         999           P1B 01-H1         CCGCCAGCACGCCAACCGCC         1000           P1B 01-H2         CCGCCAGCACGCCAACCGCC         1000           P2B 08-H3         CCGCCAGCACGCCAACCGCC         1000           P4B 04-H3         CCGCCAGCAGCACGCCAACCGCC         1000           P4B 01-H1         CCGCCAGCAGCACGCCAACCGCC         1000           P4B 01-H1         TGAAGAACGCCAGCCAACCGCC         1000           P1B 01-E4         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCT
P4B 04-H3         A C C A G C C C G G T C A G C G T C T A         980           P5B 14-C11         A C C A G C C C G G T C A G C G T C T A         980           P4BSF 03-G10         A C C A G C C C G G T C A G C G T C T A         980           980           980           980           980           980           980           980           980           980           980           980           980           980           980           980           980           990           C C G C C A G C C A A C C G C C C C C G C C A A C C G C C C G C C A G C C C C
P5B 14-C11         A C C A G C C C G G T C A G C G T C T A         980           P4BSF 03-G10         A C C A G C C C G G T C A G C G T C T A         980           WILD TYPE         C C G C C A G C A C G C C C A A C C G C C         1000           P1B 01-H1         C C G C C A G C A C G C C A A C C G C C         1000           P2B 08-H3         C C G C C A G C A C G C C A A C C G C C         1000           P4B 04-H3         C C G C C A G C A C G C C A A C C G C C         1000           P5B 14-C11         C C G C C A G C A C G C C A A C C G C C         1000           P4BSF 03-G10         C C G C C A G C A C G C C A A C C G C C         1000           WILD TYPE         T G A A G A A C G C C A G C C T G T A G         1020           P1B 01-H1         T G A A G A A C G C C A G C C T G T A G         1020           P2B 08-H3         T G A A G A A C G C C A G C C T G T A G         1020           P3B 13-D10         T G A A G A A C G C C A G C C T G T A G         1020           P4B 04-H3         T G A A G A A C G C C A G C C T G T A G         1020           P4B 04-H3         T G A A G A A C G C C A G C C T G T A G         1020           P4B 04-H3         T G A A G A A C G C C A G C C T G T A G         1020           P4B 04-H3         T G A A G A A C G C C A G C C T G T A G<
P4BSF 03-G10
WILD TYPE P1B 01-H1 P2B 08-H3 P1B 01-H1 P1B 01-H1 P1B 01-H1 P1B 04-H3 P1B 01-H1 P1B 01-E4
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P1B 01-H1         CCGCCAGCAGCACGCCAACCGCC         1000           P1B 01-E4         CCGCCAGCAGCACGCCAACCGCC         1000           P2B 08-H3         CCGCCAGCAGCACGCCAACCGCC         1000           P3B 13-D10         CCGCCAGCAGCACGCCAACCGCC         1000           P4B 04-H3         CCGCCAGCAGCACGCCAACCGCC         1000           P5B 14-C11         CCGCCAGCAGCACGCCAACCGCC         1000           P4BSF 03-G10         TGAAGAACGCCAGCCTATAG         1019           WILD TYPE         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           WILD TYPE         GACCCCGGCCGGCCCTGTAG         1020           P1B 01-H1         GACCCCGGCCGGCCTCGG         1040           P1B 01-H1         GACCCCGGCCGGCCTCGG         1040           P1B 01-H2         GACCCCGGCCGGCCCTCGG         1040
P1B 01-E4         CCGCCAGCACGCCAACCGCC         1000           P2B 08-H3         CCGCCAGCACGCCAACCGCC         1000           P3B 13-D10         CCGCCAGCACGCCAACCGCC         1000           P4B 04-H3         CCGCCAGCACGCCAACCGCC         1000           P5B 14-C11         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           WILD TYPE         TGAAGAACGCCAGCCTGTAG         1019           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           WILD TYPE         GACCCCCGGCCGGGGCCTCGG         1039           P1B 01-H1         GACCCCCGGCCGGGGCCTCGG         1040           P1B 01-H2         GACCCCCGGCCGGGCCTCGG         1040           P1B 01-H2         GACCCCCGGCCGGGCCTCGG         1040
P2B 08-H3         CCGCCAGCAGCACGCCAACCGCC         1000           P3B 13-D10         CCGCCAGCAGCACGCCAACCGCC         1000           P4B 04-H3         CCGCCAGCAGCACGCCAACCGCC         1000           P5B 14-C11         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           *** TGAAGAACGCCAGCCTGTAG         1019           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-E4         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           **** TGAAGAACGCCAGCCTGTAG         1020 </td
P4B 04-H3         CCGCCAGCACGCCAACCGCC         1000           P5B 14-C11         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           WILD TYPE         TGAAGAACGCCAGCCTGTAG         1019           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-E4         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           WILD TYPE         GACCCCGGCCGGCCGGCCTCGG         1039           P1B 01-H1         GACCCCGGCCGGCCGGGCCTCGG         1040           P1B 01-H2         GACCCCGGCCGGCCGGGCCTCGG         1040           P1B 01-E4         GACCCCGGGCCGGCCGGGCCTCGG         1040
P5B 14-C11         CCGCCAGCACGCCAACCGCC         1000           P4BSF 03-G10         1000         1010           WILD TYPE         TGAAGAACGCCAGCCTGTAG         1019           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-E4         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           WILD TYPE         GACCCCGGCCGGCCCGGCCTCGG         1039           P1B 01-H1         GACCCCGGCCGGCCCGGGCCTCGG         1040           P1B 01-E4         GACCCCGGCCGGCCCGGGCCTCGG         1040
P4BSF 03-G10         CCGCCAGCACGCCAACCGCC         1000           1000         1010           WILD TYPE         TGAAGAACGCCAGCCTGTAG         1019           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           1020         1030           WILD TYPE         GACCCCGGCCGGGCCTCGG         1039           P1B 01-H1         GACCCCGGCCGGGCCTCGG         1040           P1B 01-H1         GACCCCGGCCGGGCCTCGG         1040           P1B 01-H1         GACCCCGGCCGGCCGGGCCTCGG         1040           P1B 01-H1         GACCCCGGCCGGCCCGGGCCTCCGG         1040
1000   1010   1010     1010     1010     1010     1010     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019   1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019   1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019   1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019   1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019     1019
WILD TYPE         TGAAGAACGCCAGCCTGTAG         1019           P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-E4         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           WILD TYPE         GACCCCCGGCCGGGCCTCGG         1039           P1B 01-H1         GACCCCCGGCCGGGCCTCGG         1040           P1B 01-E4         GACCCCGGCCGGCCCTCGG         1040
P1B 01-H1         TGAAGAACGCCAGCCTGTAG         1020           P1B 01-E4         TGAAGAACGCCAGCCTGTAG         1020           P2B 08-H3         TGAAGAACGCCAGCCTGTAG         1020           P3B 13-D10         TGAAGAACGCCAGCCTGTAG         1020           P4B 04-H3         TGAAGAACGCCAGCCTGTAG         1020           P5B 14-C11         TGAAGAACGCCAGCCTGTAG         1020           P4BSF 03-G10         TGAAGAACGCCAGCCTGTAG         1020           WILD TYPE         GACCCCCGGCCGGCCCTCGG         1039           P1B 01-H1         GACCCCCGGCCGGGCCTCGG         1040           P1B 01-E4         GACCCCGGCCGGCCCTCGG         1040
P1B 01-E4       TGAAGAACGCCAGCCTGTAG       1020         P2B 08-H3       TGAAGAACGCCAGCCTGTAG       1020         P3B 13-D10       TGAAGAACGCCAGCCTGTAG       1020         P4B 04-H3       TGAAGAACGCCAGCCTGTAG       1020         P5B 14-C11       TGAAGAACGCCAGCCTGTAG       1020         P4BSF 03-G10       TGAAGAACGCCAGCCTGTAG       1020         WILD TYPE       GACCCCCGGCCGGCCTGTAG       1030         P1B 01-H1       GACCCCCGGCCGGGCCTCGG       1040         P1B 01-E4       GACCCCGGCCGGGCCTCGG       1040
P2B 08-H3       TGAAGAACGCCAGCCTGTAG       1020         P3B 13-D10       TGAAGAACGCCAGCCTGTAG       1020         P4B 04-H3       TGAAGAACGCCAGCCTGTAG       1020         P5B 14-C11       TGAAGAACGCCAGCCTGTAG       1020         P4BSF 03-G10       TGAAGAACGCCAGCCTGTAG       1020         WILD TYPE       GACCCCGGCCGGGCCTGTAG       1030         P1B 01-H1       GACCCCGGCCGGGGCCTCGG       1040         P1B 01-E4       GACCCCGGCCGGGCCTCGG       1040
P3B 13-D10       TGAAGAACGCCAGCCTGTAG       1020         P4B 04-H3       TGAAGAACGCCAGCCTGTAG       1020         P5B 14-C11       TGAAGAACGCCAGCCTGTAG       1020         P4BSF 03-G10       TGAAGAACGCCAGCCTGTAG       1020         1020         1020       1030         WILD TYPE       GACCCCGGCCGGGCCTCGG       1039         P1B 01-H1       GACCCCGGCCGGGGCCTCGG       1040         P1B 01-E4       GACCCCGGCCGGGCCTCGG       1040
P4B 04-H3       TGAAGAACGCCAGCCTGTAG       1020         P5B 14-C11       TGAAGAACGCCAGCCTGTAG       1020         P4BSF 03-G10       TGAAGAACGCCAGCCTGTAG       1020         1020         1020         1020         1030         WILD TYPE       GACCCCGGCCGGGCCTCGG       1039         P1B 01-H1       GACCCCGGCCGGGCCTCGG       1040         P1B 01-E4       GACCCCGGCCGGGCCTCGG       1040
P5B 14-C11 TGAAGAACGCCAGCCTGTAG 1020 TGAAGAACGCCAGCCTGTAG 1020 1020 1020 1020 1020 1020 1020 102
P4BSF 03-G10       TGAAGAACGCCAGCCTGTAG       1020         1020       1030         WILD TYPE       GACCCCGGCCGGGGCCTCGG       1039         P1B 01-H1       GACCCCGGCCGGGGCCTCGG       1040         P1B 01-E4       GACCCCGGCCGGGGCCTCGG       1040
1020   1030   1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039     1039
WILD TYPE GACCCCGGCCGGGCCTCGG 1039 P1B 01-H1 GACCCCGGCCGGGGCCTCGG 1040 P1B 01-E4 GACCCCGGCCGGGGCCTCGG 1040
P1B 01-H1 GACCCCGGCCGGGCCTCGG 1040 P1B 01-E4 GACCCCGGCCGGGCCTCGG 1040
P1B 01-E4 GACCCCGGCCGGGGCCTCGG 1040
P2B 08-H3 GACCCCGGCCGGGCCTCGG 1040
P3B 13-D10 GACCCCGGCCGGGCCTCGG 1040
P4B 04-H3 GACCCCGGCCGGGCCTCGG 1040
P5B 14-C11 GACCCCGGCCGGGCCTCGG 1040
P4BSF 03-G10 GACCCCGGCCGGGGCCTCGG 1040
1040
WILD TYPE CCCGGGCC 1047
P1B 01-H1
P1B 01-E4
P2B 08-H3
P3B 13-D10
P5B 14-C11
P4BSF 03-G10

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